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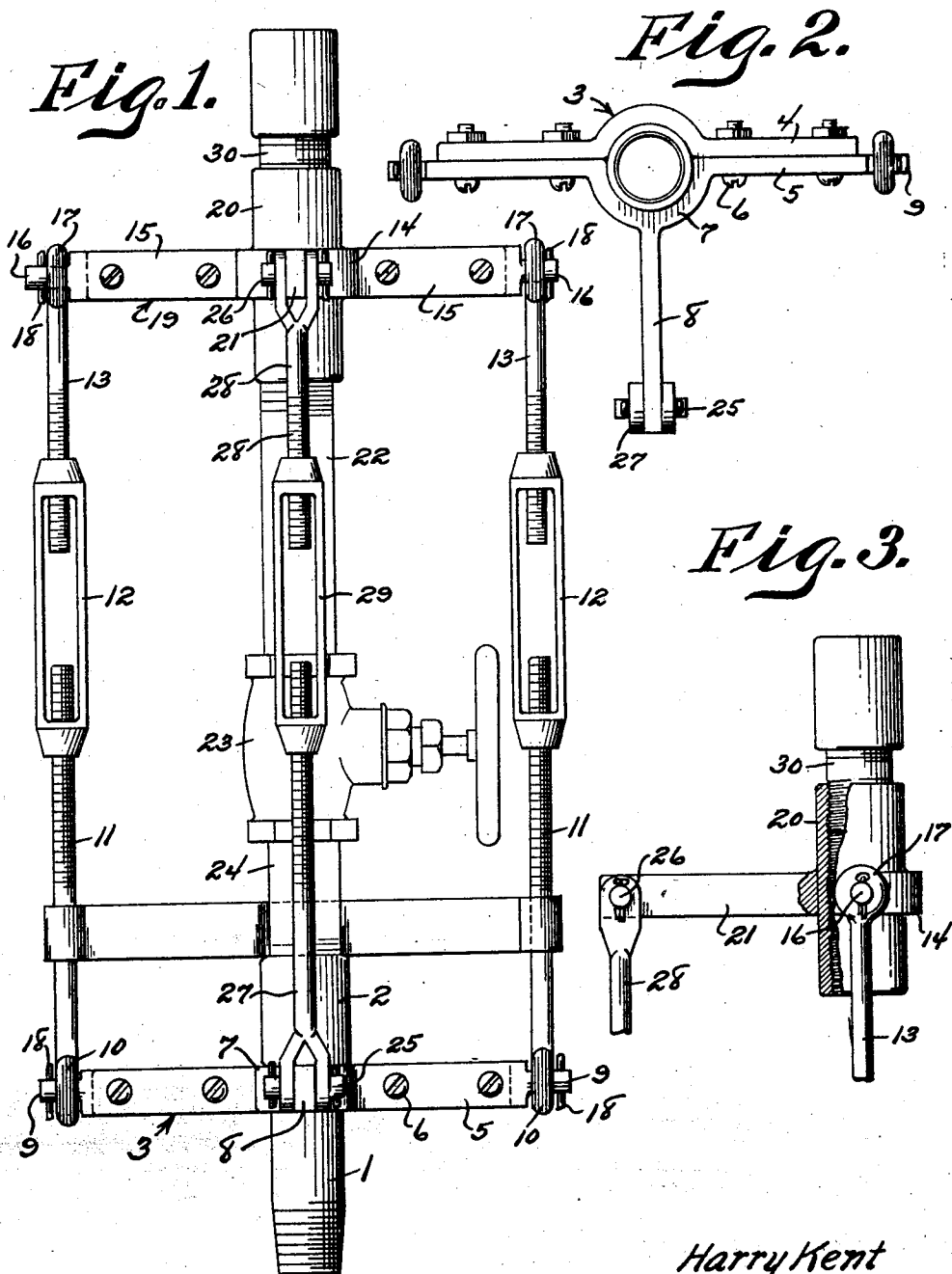
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H. KENT

DEVICE FOR APPLYING CONTROL HEADS FOR WELLS

Filed March 26, 1926

2 Sheets-Sheet 1



WITNESS: *John Dorman*

Harry Kent
INVENTOR
BY *Walter J. Evans*
ATTORNEY

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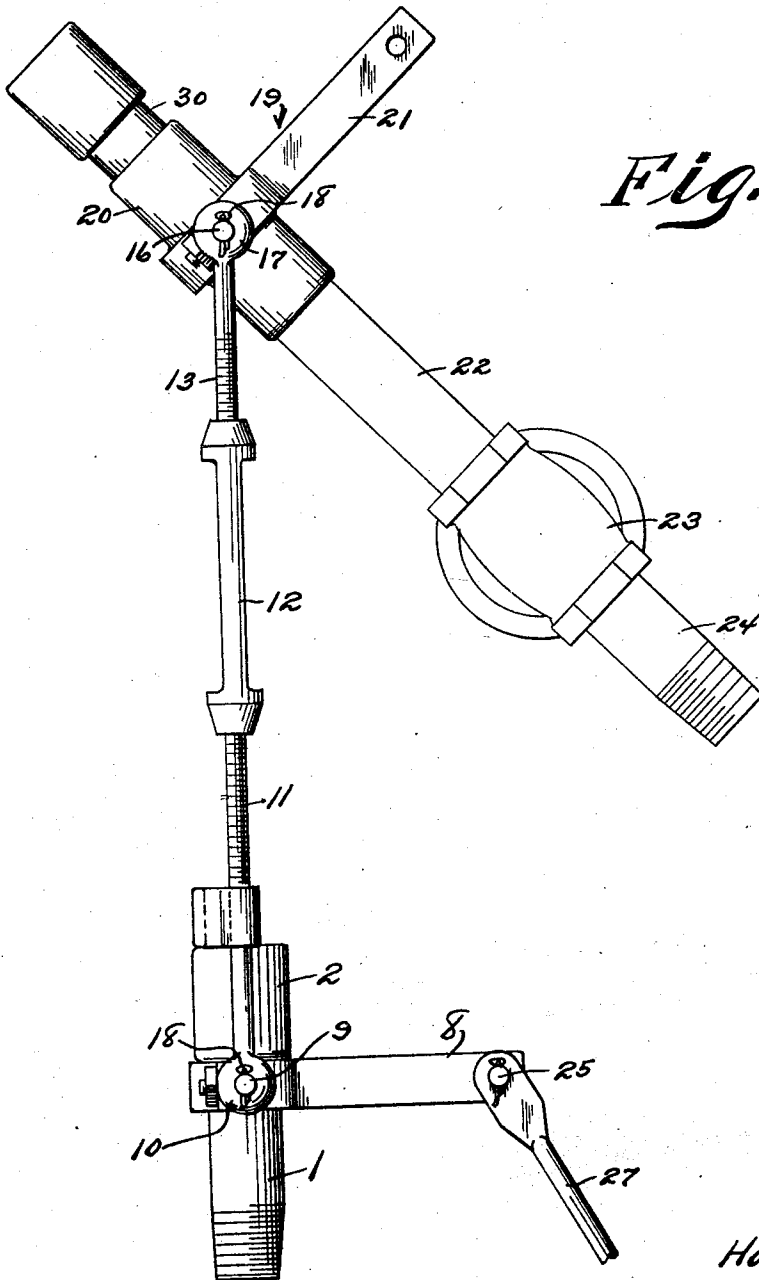


Fig. 4.

Harry Kent

INVENTOR

BY Victor J. Evans

ATTORNEY

WITNESS:

John D. Brown

UNITED STATES PATENT OFFICE.

HARRY KENT, OF SULPHUR, OKLAHOMA.

DEVICE FOR APPLYING CONTROL HEADS FOR WELLS.

Application filed March 23, 1926. Serial No. 97,800.

My present invention has reference to a device for use in connection with oil or gas wells, and my object is the provision of means for facilitating the arrangement of control heads on flowing wells.

A further object is the provision of a device for this purpose characterized by simplicity in construction, and reliability and efficiency in practical use.

To the attainment of the foregoing, the invention consists in the improvement as hereinafter described and definitely claimed.

In the drawings:

Figure 1 is an elevation of the improvement in applied position.

Figure 2 is a bottom plan view thereof.

Figure 3 is a fragmentary side elevation with parts in section.

Figure 4 is a side elevation, to more clearly illustrate the arrangement of parts before the improvement is swung to bring the control head in a position to be coupled to the casing collar.

Referring now to the drawings in detail, the numeral 1 designates a portion of a well casing, and 2 a collar which is screwed thereon. The well is flowing, and I fix on the casing 1 a clamp of a particular and peculiar construction and which is broadly indicated by the numeral 3. The clamp includes two removably associated sections, each having its central portions rounded outwardly to provide a round opening for the clamp. Each of the sections, from its said rounded portion, has outwardly extending arms 4 and 5, respectively, and these arms are connected together by removable means 6. The section provided with the arms 5 has its rounded portion 7 formed with an arm extension 8 arranged at a right angle with respect to its arms 5. The arms 5 terminate in short rounded extensions or shafts 9, and mounted on these shafts 9 there are the eye ends 10 of rods 11. The rods are engaged by turn buckles 12, the outer ends of the said turn buckles having threaded therethrough rods 13 whose threads are at opposite hand pitch to those of the rod 11. The upper or outer member of the improvement is somewhat similarly constructed to that of the clamp 3, the same including a central rounded portion 14 having oppositely extending arms 15 provided with short shafts 16 to receive the eyes 17 of the rod or bolt members 13. Cotter pins 18 pass through the short shafts 9 and 16 for holding the bolts of the turn

buckles on said shafts. Either integrally formed with or welded in the rounded portion 14 of the upper member or clamp 19 there is a collar 20. This collar is of a greater length than ordinary collars; the desirability of such length collar will presently be apparent.

Extending outwardly from the rounded portion 14 of the member 19, in the same direction as the arm 8 extends from the member 3, there is an arm 21.

The member 19 is swung with the rods of the turn-buckles on the trunnions 9 and there is screwed into the special collar 20 a nipple or pipe 22. This nipple is also screwed into the casing of the control head or valve 23. Screwed in the opposite end of the said control head or valve there is a second and preferably shorter nipple 24. The nipples 22 and 24 are effectively secured in the casing of the control head or valve 23, the same being preferably welded to the said casing, so that the nipples and casing will turn in unison. The nipple 22 has its outer end threaded for a comparatively great length and the said nipple is wholly or almost wholly screwed into the collar 20. An elevator, or any other suitable means is now employed for swinging the device to vertical position which brings the threaded end of the nipple 24 above the collar 2. To hold the nipple 24 in positive alignment with the collar 2 secure, by means 25 and 26 to the outer ends of the arms 8 and 21, the bifurcated ends of oppositely hand pitch threaded rods 27 and 28 which are engaged by a turn buckle 29. The control head, including the nipples 22 and 24, is bodily turned to back the nipple 22 out of the special collar 2 and bring the sleeve 24 in threaded engagement in the collar 2. Of course, the turn buckles 12 and 29 may be adjusted to facilitate the backing of the control head out of the collar 2. During the placing of the control head on the casing 1, the valve 23 is opened, but after the control head is firmly secured on the well casing the valve may be closed.

With my improvement it will be noted that control heads may be easily, quickly and accurately coupled to flowing wells. The rounded body portion of the lower clamp underlies the collar 2, and the turn buckle arrangement between the clamp 3 and the outer member 19, which may be also termed a clamp, not only properly centers the con-

trol head when being screwed into the collar 2, but materially strengthens the control head or valve when the same is subjected to the pressure of the flowing fluid from the well. In the outer end of the collar 20 there is screwed a pipe line extension 30.

Adapted for contact with the nipple 24 there is what I will term a clamp member 50. This clamp has oppositely extending arms 51 which have their ends fixedly secured to the rods 11. This will prevent the pressure from turning the device upside down when it is being swung into place.

It is believed that the simplicity of my construction and the advantages thereof, will be perfectly apparent to those skilled in the art to which this invention relates, when the foregoing description is read in connection with the accompanying drawings, but it is to be understood that I do not wish to be restricted to the precise details of construction herein set forth and hold myself entitled to make all such changes therefrom as fairly fall within the scope of what I claim without departing from the spirit or sacrificing any of the advantages of the invention.

Having described the invention, I claim:—

1. An apparatus for applying control heads to flowing wells, including a clamp fixed on the upper end below and in contact with the top collar of a well casing, a member having an elongated collar in the center thereof, threaded throughout its length and in which one of the nipples of the control head is fully screwed, swingable means connecting the clamp with the said member, a brace between the clamp and member removably attached to these elements when the member has been swung to bring the lower nipple of the control head opposite but in a line with the collar of the well casing.

2. The combination with a well casing having a collar on the outer end thereof, designed to have screwed therein a control head, of a device for applying the control head to the clamp, said device comprising a clamp arranged on the well casing below

and in contact with the collar, and a member disposed opposite the clamp and carrying a central sleeve of a comparatively great length and which is threaded throughout and which is designed to have screwed therein the outer end of the control head, adjustable means pivotally connecting the clamp and the member, and removable adjustable means adapted to be connected to the clamp and said member when the device has been swung to bring the control head in a position to be backed off of the last mentioned collar and screwed into the well casing collar.

3. The combination with a casing of a flowing well having a collar screwed on the outer end thereof, of a means for threadedly securing a control head in the collar, said means comprising a lower clamp, made up of two removably associated sections, and having a rounded portion to receive the casing therethrough and to contact with the under face of the collar, said clamp having oppositely extending parallel arms whose ends are formed with trunnions and having another arm arranged centrally thereon and at right angles with respect to the first mentioned arm, an outer clamp having a central elongated collar which is threaded throughout the length thereof and having oppositely extending parallel arms whose ends are formed with trunnions and having a central outstanding arm arranged at right angles with respect to the first mentioned arms, oppositely hand pitched bolt members having eye ends received on the trunnions of the respective clamps, means holding the bolt members on the trunnions, turn buckles connecting the members, the outer nipple of the control head designed to be first screwed into the last mentioned collar prior to the swinging of the device to a vertical position to arrange the lower nipple of the control head over the nipple of the well casing, oppositely pitched rods designed to be connected to the central arms of the clamps when the device is in its last mentioned position and a turn buckle engaging said rods.

In testimony whereof, I affix my signature.
HARRY KENT.